

Use Attainability Analysis  
for  
WBID 1234 Monegaw Creek

Submitted by  
SES Inc.

to  
Missouri Department of Natural Resources  
Water Protection Program

Date received: November 14, 2007

**Field Data Sheets for Recreation Use Stream Surveys**

**Data Sheet A - Water Body Identification**

**I. Water Body Information** (For water body being surveyed)

Water Body Name (from USGS 7.5' quad): Monegaw Creek	
Missouri Water Body Identification (WBID) Number: 1234	
8 digit HUC code: 10290105	County: St. Clair
Upstream Legal Description (from Table H): T39N R28W Sec 4	
Downstream Legal Description (from Table H): Y38N R27W Sec 22	
Number of sites evaluated: 6	
List all site numbers, listed consequently upstream to downstream: 1,2,3,4,5,6	

**Site Locations Map(s):** Attach a map of the entire segment with assessment sites clearly labeled.  
Mark any other items that may be of interest.

**II. Facility Information** (list all permitted discharges to the water body segment)

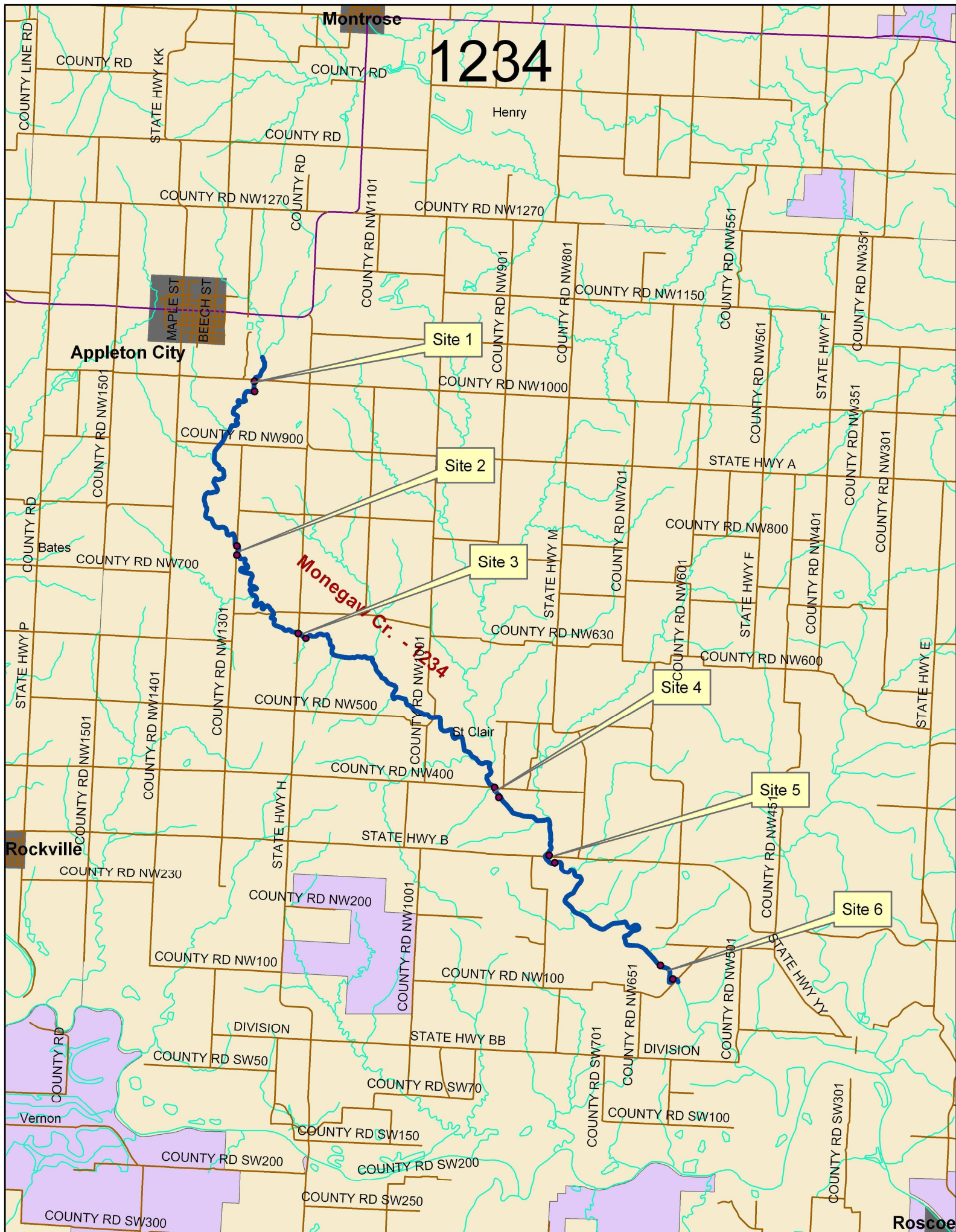
Facility Name(s) and Permit Number(s): Appleton City WWTF MO 0021105
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**III. UAA Surveyor** (please print legibly)

Name of Surveyor: Aaron Ball	Telephone Number: (913)307-0046
Organization/Employer: SES, Inc.	

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

**Signed:** Aaron Ball **Date:** 11.09.07



WBID # 1234  
 Site # 1

### **Field Data Sheets For Recreational Use Stream Surveys**

#### **Data Sheet B-Site Characterization**

Date & Time:	10/25/07	14:45	Site Location Description (e.g. road crossing):
Personnel:	Aaron Ball, Drew Dodson		CR 1000
Current Weather Conditions:	clear	Facility Name:	Appleton City WWTF
Weather conditions for the past 10 days:	2.17 inches	Permit Number:	MO 0021105
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>			

#### **Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, in Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0411357	4225713		5.1	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0411336	4225468		8.4	

#### **Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
34	Upstream	35	Downstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

#### **Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 1234  
Site # 1

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input checked="" type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments: none				

**Evidence of Human Use:**

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: none				

**Substrate:**

% Cobble	% Gravel 60	% Sand	% Silt 30	% Mud/Clay 10	% Bedrock
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**Aquatic Vegetation:**

none
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**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 1234  
Site # 1

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

none

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Aaron Ball Date of Survey: 10/25/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>1234</u> Site #: <u>1</u>  Estimated Channel Incision: <u>2.0</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0411357</u> UTM Y: <u>4225713</u> +/- <u>5.1</u> (meters) <b>11</b> UTM X: <u>0411336</u> UTM Y: <u>4225468</u> +/- <u>8.4</u> (meters)  Average Stream Width: <u>7</u> (meters)      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Aaron Ball, Drew Dodson</u>	<b>Dissolved Oxygen</b>  Date: <u>10/25/07</u> Time: <u>14:45</u>  Dissolved Oxygen: <u>15.5</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>10.5</u> (°C)
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Station	Transect Cross-Section																					
	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.7	0.50	0.4	0.05	0.2	0.05	0.5	0.40	0.5	0.20	0.7	0.20	0.6	0.15	0.5	0.20	0.4	0.45	0.3	0.05	0.6	0.25
2	1.4	0.35	0.8	0.05	0.4	0.05	1.0	0.50	1.0	0.50	1.4	0.40	1.2	0.20	1.0	0.45	0.8	0.60	0.6	0.25	1.2	0.35
3	2.1	0.35	1.2	0.10	0.6	0.10	1.5	0.60	1.5	0.65	2.1	0.45	1.8	0.30	1.5	0.60	1.2	0.60	0.9	0.25	1.8	0.30
4	2.8	0.35	1.6	0.10	0.8	0.10	2.0	0.70	2.0	0.70	2.8	0.50	2.4	0.40	2.0	0.60	1.6	0.60	1.2	0.25	2.4	0.50
5	3.5	0.30	2.0	0.15	1.0	0.10	2.5	0.70	2.5	0.70	3.5	0.45	3.0	0.40	2.5	0.60	2.0	0.45	1.5	0.25	3.0	0.50
6	4.2	0.30	2.4	0.10	1.2	0.10	3.0	0.60	3.0	0.70	4.2	0.45	3.6	0.55	3.0	0.55	2.4	0.40	1.8	0.35	3.6	0.35
7	4.9	0.25	2.8	0.00	1.4	0.10	3.5	0.50	3.5	0.50	4.9	0.50	4.2	0.60	3.5	0.50	2.8	0.40	2.1	0.25	4.2	0.30
8	5.6	0.30	3.2	0.05	1.6	0.15	4.0	0.40	4.0	0.30	5.6	0.45	4.8	0.50	4.0	0.45	3.2	0.15	2.4	0.20	4.8	0.20
9	6.3	0.20	3.6	0.10	1.8	0.10	4.5	0.25	4.5	0.15	6.3	0.25	5.4	0.30	4.5	0.10	3.6	0.10	2.7	0.10	5.4	0.15
Right Bank	7.0	0.00	4.0	0.00	2.0	0.00	5.0	0.00	5.0	0.00	7.0	0.00	6.0	0.00	5.0	0.00	4.0	0.00	3.0	0.00	6.0	0.00
Feature Type <small>(riffle, run, or pool)</small>	pool		riffle		pool		pool		pool		pool		pool		pool		pool		pool		pool	

**Notes:** Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width  
 GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.  
 Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)  
 Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)  
 All measurements to be taken to the nearest 0.01 meter.

0.9 MAXIMUM

0.1 MEDIAN

Signed: Aaron Ball      Date: 10/25/07

WBID # 1234  
 Site # 2

### **Field Data Sheets For Recreational Use Stream Surveys**

#### **Data Sheet B-Site Characterization**

Date & Time:	10/25/07	14:05	Site Location Description (e.g. road crossing):
Personnel:	Aaron Ball, Drew Dodson		CR 1301
Current Weather Conditions:	clear	Facility Name:	Appleton City WWTF
Weather conditions for the past 10 days:	2.17 inches	Permit Number:	MO 0021105
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>			

#### **Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, in Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0410926	4221676		6.3	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0410927	4221455		7.8	

#### **Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
32	Upstream	33	Downstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

#### **Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				



WBID # 1234  
Site # 2

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input checked="" type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments:				

**Evidence of Human Use:**

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input checked="" type="checkbox"/> Livestock watering
comments/other:				

**Substrate:**

% Cobble	% Gravel 30	% Sand	% Silt 70	% Mud/Clay	% Bedrock
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**Aquatic Vegetation:**

none
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**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 1234  
Site # 2

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

none

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Aaron Ball Date of Survey: 10/25/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>1234</u> Site #: <u>2</u>  Estimated Channel Incision: <u>2.0</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0410926</u> UTM Y: <u>4221676</u> +/- <u>6.3</u> (meters) <b>11</b> UTM X: <u>0410927</u> UTM Y: <u>4221455</u> +/- <u>7.8</u> (meters)  Average Stream Width: <u>4</u> (meters)      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Aaron Ball, Drew Dodson</u>														Dissolved Oxygen								
														Date: <u>10/25/07</u> Time: <u>14:05</u>  Dissolved Oxygen: <u>18.2</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>11.1</u> (°C)								
Transect Cross-Section																						
01		02		03		04		05		06		07		08		09		10		11		
Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1	0.2	0.05	0.5	0.25	0.6	0.70	0.6	0.10	0.5	0.10	0.2	0.05	0.6	0.05	0.6	0.20	0.4	0.20	0.2	0.05	0.2	0.05
2	0.4	0.10	1.0	0.30	1.2	0.80	1.2	0.20	1.0	0.25	0.4	0.05	1.2	0.20	1.2	0.50	0.8	0.30	0.4	0.10	0.4	0.05
3	0.6	0.10	1.5	0.45	1.8	0.85	1.8	0.20	1.5	0.30	0.6	0.10	1.8	0.30	1.8	0.80	1.2	0.35	0.6	0.20	0.6	0.10
4	0.8	0.10	2.0	0.50	2.4	0.80	2.4	0.20	2.0	0.30	0.8	0.10	2.4	0.30	2.4	0.85	1.6	0.40	0.8	0.25	0.8	0.10
5	1.0	0.10	2.5	0.50	3.0	0.70	3.0	0.25	2.5	0.40	1.0	0.10	3.0	0.25	3.0	0.90	2.0	0.40	1.0	0.25	1.0	0.10
6	1.2	0.15	3.0	0.45	3.6	0.70	3.6	0.30	3.0	0.40	1.2	0.15	3.6	0.25	3.6	0.80	2.4	0.40	1.2	0.25	1.2	0.10
7	1.4	0.15	3.5	0.30	4.2	0.70	4.2	0.25	3.5	0.35	1.4	0.10	4.2	0.20	4.2	0.70	2.8	0.30	1.4	0.20	1.4	0.10
8	1.6	0.20	4.0	0.20	4.8	0.45	4.8	0.10	4.0	0.25	1.6	0.05	4.8	0.10	4.8	0.45	3.2	0.20	1.6	0.15	1.6	0.10
9	1.8	0.20	4.5	0.15	5.4	0.25	5.4	0.05	4.5	0.15	1.8	0.05	5.4	0.10	5.4	0.20	3.6	0.10	1.8	0.10	1.8	0.05
Right Bank	2.0	0.00	5.0	0.00	6.0	0.00	6.0	0.00	5.0	0.00	2.0	0.00	6.0	0.00	6.0	0.00	4.0	0.00	2.0	0.00	2.0	0.00
Feature Type	pool		pool		pool		pool		pool		riffle		pool		pool		pool		pool		riffle	

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Aaron Ball      Date: 10/25/07

WBID # 1234  
 Site # 3

### **Field Data Sheets For Recreational Use Stream Surveys**

#### **Data Sheet B-Site Characterization**

Date & Time:	10/25/07	13:15	Site Location Description (e.g. road crossing):
Personnel:	Aaron Ball, Drew Dodson		Highway H
Current Weather Conditions:	clear	Facility Name:	Appleton City WWTF
Weather conditions for the past 10 days:	2.17 inches	Permit Number:	MO 0021105
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>			

#### **Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0412424	4219531		8.1	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0412619	4219405		7.2	

#### **Photos:**

Photo ID#	Photo Purpose	Photo ID#:	Photo Purpose	Photo ID#:	Photo Purpose
30	Upstream	31	Downstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

#### **Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 1234  
Site # 3

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input checked="" type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments: none				

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: none				

**Substrate:**

% Cobble	% Gravel 15	% Sand	% Silt 50	% Mud/Clay 35	% Bedrock
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**Aquatic Vegetation:**

none
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**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input checked="" type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 1234  
Site # 3

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

none

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Aaron Ball Date of Survey: 10/25/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>1234</u> Site #: <u>3</u>  Estimated Channel Incision: <u>3.0</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0412424</u> UTM Y: <u>4219531</u> +/- <u>8.1</u> (meters) <b>11</b> UTM X: <u>0412619</u> UTM Y: <u>4219405</u> +/- <u>7.2</u> (meters)  Average Stream Width: <u>7</u> (meters)      Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Aaron Ball, Drew Dodson</u>														Dissolved Oxygen					
														Date: <u>10/25/07</u>		Time: <u>13:15</u>			
														Dissolved Oxygen: <u>16.4</u> (mg/L)					
														Dissolved Oxygen: _____ (% sat)					
														Specific Cond: _____ (µS/cm)					
														Water Temperature: <u>9.5</u> (°C)					

Transect Cross-Section																						
01		02		03		04		05		06		07		08		09		10		11		
Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1	0.8	0.50	0.7	0.50	0.8	0.15	0.8	0.20	0.8	0.25	0.1	0.05	0.7	0.20	0.7	0.20	0.8	0.05	0.5	0.50	0.7	0.15
2	1.6	0.75	1.4	0.80	1.6	0.45	1.6	0.40	1.6	0.30	0.2	0.05	1.4	0.30	1.4	0.20	1.6	0.20	1.0	0.45	1.4	0.40
3	2.4	0.95	2.1	1.00	2.4	0.65	2.4	0.50	2.4	0.40	0.3	0.10	2.1	0.40	2.1	0.20	2.4	0.60	1.5	0.50	2.1	0.50
4	3.2	0.85	2.8	1.00	3.2	0.55	3.2	0.50	3.2	0.55	0.4	0.10	2.8	0.50	2.8	0.25	3.2	0.75	2.0	0.45	2.8	0.55
5	4.0	0.80	3.5	1.00	4.0	0.65	4.0	0.65	4.0	0.65	0.5	0.10	3.5	0.65	3.5	0.25	4.0	0.55	2.5	0.35	3.5	0.65
6	4.8	0.65	4.2	1.00	4.8	0.60	4.8	0.90	4.8	0.70	0.6	0.10	4.2	0.55	4.2	0.25	4.8	0.45	3.0	0.30	4.2	0.70
7	5.6	0.50	4.9	1.00	5.6	0.55	5.6	0.90	5.6	0.80	0.7	0.10	4.9	0.35	4.9	0.30	5.6	0.40	3.5	0.30	4.9	0.45
8	6.4	0.45	5.6	0.75	6.4	0.45	6.4	0.75	6.4	0.65	0.8	0.05	5.6	0.20	5.6	0.25	6.4	0.30	4.0	0.20	5.6	0.30
9	7.2	0.10	6.3	0.40	7.2	0.20	7.2	0.40	7.2	0.40	0.9	0.05	6.3	0.10	6.3	0.10	7.2	0.10	4.5	0.15	6.3	0.10
Right Bank	8.0	0.00	7.0	0.00	8.0	0.00	8.0	0.00	8.0	0.00	1.0	0.00	7.0	0.00	7.0	0.00	8.0	0.00	5.0	0.00	7.0	0.00
Feature Type	pool		pool		pool		pool		pool		riffle		pool		pool		pool		pool		pool	

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Aaron Ball      Date: 10/25/07

WBID # 1234  
 Site # 4

**Field Data Sheets For Recreational Use Stream Surveys**

**Data Sheet B-Site Characterization**

Date & Time:	10/25/07	12:39	Site Location Description (e.g. road crossing):
Personnel:	Aaron Ball, Drew Dodson		CR 400
Current Weather Conditions:	clear	Facility Name:	Appleton City WWTF
Weather conditions for the past 10 days:	2.17 inches	Permit Number:	MO 0021105
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>			

**Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0417243	4215746		5.4	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0417341	4215495		6.3	

**Photos:**

Photo ID#	Photo Purpose	Photo ID#:	Photo Purpose	Photo ID#:	Photo Purpose
28	Upstream	29	Downstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

**Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				



WBID # 1234  
Site # 4

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments: none				

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: none				

**Substrate:**

% Cobble	% Gravel 70	% Sand	% Silt 30	% Mud/Clay	% Bedrock
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**Aquatic Vegetation:**

none
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**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input checked="" type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 1234  
Site # 4

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

none

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Aaron Ball Date of Survey: 10/25/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>1234</u> Site #: <u>4</u>														<b>Dissolved Oxygen</b>								
Estimated Channel Incision: <u>3.0</u> (m) (height between low bank width and water)														Date: <u>10/25/07</u> Time: <u>12:37</u>								
GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM)														Dissolved Oxygen: <u>17.7</u> (mg/L)								
<b>01</b> UTM X: <u>0417243</u> UTM Y: <u>4215746</u> +/- <u>5.4</u> (meters)														Dissolved Oxygen: _____ (% sat)								
<b>11</b> UTM X: <u>0417341</u> UTM Y: <u>4215495</u> +/- <u>6.3</u> (meters)														Specific Cond: _____ (µS/cm)								
Average Stream Width: <u>6</u> (meters)      Length of Survey Segment: <u>150</u> (meters)														Water Temperature: <u>14</u> (°C)								
(To determine Length of Reach)      (20x average stream width)																						
Field Staff: <u>Aaron Ball, Drew Dodson</u>																						
<b>Transect Cross-Section</b>																						
01		02		03		04		05		06		07		08		09		10		11		
Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1	0.5	0.15	0.8	0.25	0.5	0.10	0.3	0.10	0.4	0.05	0.8	0.20	0.8	0.25	0.8	0.10	0.6	0.10	0.4	0.20	0.8	0.20
2	1.0	0.30	1.6	0.50	1.0	0.25	0.6	0.15	0.8	0.05	1.6	0.60	1.6	0.20	1.6	0.00	1.2	0.15	0.8	0.20	1.6	0.50
3	1.5	0.30	2.4	0.60	1.5	0.30	0.9	0.20	1.2	0.10	2.4	0.75	2.4	0.30	2.4	0.05	1.8	0.15	1.2	0.35	2.4	0.50
4	2.0	0.30	3.2	0.65	2.0	0.30	1.2	0.20	1.6	0.10	3.2	0.80	3.2	0.30	3.2	0.05	2.4	0.20	1.6	0.45	3.2	0.50
5	2.5	0.30	4.0	0.60	2.5	0.35	1.5	0.20	2.0	0.10	4.0	0.90	4.0	0.45	4.0	0.05	3.0	0.25	2.0	0.50	4.0	0.60
6	3.0	0.35	4.8	0.60	3.0	0.30	1.8	0.20	2.4	0.10	4.8	0.85	4.8	0.50	4.8	0.10	3.6	0.30	2.4	0.45	4.8	0.65
7	3.5	0.35	5.6	0.55	3.5	0.40	2.1	0.25	2.8	0.10	5.6	0.70	5.6	0.65	5.6	0.10	4.2	0.25	2.8	0.40	5.6	0.60
8	4.0	0.30	6.4	0.40	4.0	0.40	2.4	0.20	3.2	0.10	6.4	0.65	6.4	0.65	6.4	0.05	4.8	0.25	3.2	0.30	6.4	0.60
9	4.5	0.15	7.2	0.30	4.5	0.20	2.7	0.10	3.6	0.10	7.2	0.45	7.2	0.35	7.2	0.05	5.4	0.15	3.6	0.10	7.2	0.25
Right Bank	5.0	0.00	8.0	0.00	5.0	0.00	3.0	0.00	4.0	0.00	8.0	0.00	8.0	0.00	8.0	0.00	6.0	0.00	4.0	0.00	8.0	0.00
Feature Type	pool		pool		pool		pool		riffle		pool		pool		riffle		pool		pool		pool	

**Notes:** Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Aaron Ball      Date: 10/25/07

WBID # 1234  
 Site # 5

### **Field Data Sheets For Recreational Use Stream Surveys**

#### **Data Sheet B-Site Characterization**

Date & Time:	10/25/07	11:41	Site Location Description (e.g. road crossing):
Personnel:	Aaron Ball, Drew Dodson		Highway B
Current Weather Conditions:	clear	Facility Name:	Appleton City WWTF
Weather conditions for the past 10 days:	2.17 inches	Permit Number:	MO 0021105
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>			

#### **Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0418578	4214089		4.5	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0418714	4213914		7.2	

#### **Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
26	Upstream	27	Downstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

#### **Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 1234  
Site # 5

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input checked="" type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments: none				

**Evidence of Human Use:**

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: none				

**Substrate:**

% Cobble	% Gravel 60	% Sand	% Silt	% Mud/Clay 40	% Bedrock
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**Aquatic Vegetation:**

none
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**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input checked="" type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 1234  
Site # 5

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

none

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Aaron Ball Date of Survey: 10/25/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>1234</u> Site #: <u>5</u> Estimated Channel Incision: <u>3.0</u> (m) (height between low bank width and water) GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0418578</u> UTM Y: <u>4214089</u> +/- <u>4.5</u> (meters) <b>11</b> UTM X: <u>0418714</u> UTM Y: <u>4213914</u> +/- <u>7.2</u> (meters) Average Stream Width: <u>8</u> (meters)      Length of Survey Segment: <u>160</u> (meters) (To determine Length of Reach)      (20x average stream width) Field Staff: <u>Aaron Ball, Drew Dodson</u>														<b>Dissolved Oxygen</b> Date: <u>10/25/07</u> Time: <u>11:41</u> Dissolved Oxygen: <u>13.5</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>10.7</u> (°C)								
<b>Transect Cross-Section</b>																						
Station	<b>01</b>		<b>02</b>		<b>03</b>		<b>04</b>		<b>05</b>		<b>06</b>		<b>07</b>		<b>08</b>		<b>09</b>		<b>10</b>		<b>11</b>	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)		
<b>Left Bank</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1	0.8	0.40	0.9	0.70	0.8	0.30	0.9	0.40	0.7	0.20	0.3	0.25	0.9	0.25	0.6	0.20	0.2	0.10	0.7	0.30	0.5	0.10
2	1.6	0.70	1.8	0.90	1.6	0.40	1.8	0.55	1.4	0.30	0.6	0.50	1.8	0.65	1.2	0.40	0.4	0.10	1.4	0.50	1.0	0.30
3	2.4	0.90	2.7	1.00	2.4	0.45	2.7	0.40	2.1	0.35	0.9	0.70	2.7	1.00	1.8	0.40	0.6	0.20	2.1	0.55	1.5	0.40
4	3.2	1.00	3.6	1.00	3.2	0.40	3.6	0.30	2.8	0.40	1.2	0.60	3.6	1.00	2.4	0.30	0.8	0.25	2.8	0.95	2.0	0.60
5	4.0	1.00	4.5	1.00	4.0	0.30	4.5	0.30	3.5	0.50	1.5	0.40	4.5	1.00	3.0	0.30	1.0	0.30	3.5	0.90	2.5	0.70
6	4.8	1.00	5.4	1.00	4.8	0.35	5.4	0.25	4.2	0.65	1.8	0.40	5.4	1.00	3.6	0.45	1.2	0.40	4.2	0.70	3.0	0.80
7	5.6	1.00	6.3	1.00	5.6	0.40	6.3	0.35	4.9	0.85	2.1	0.20	6.3	1.00	4.2	0.55	1.4	0.35	4.9	0.50	3.5	0.65
8	6.4	0.80	7.2	1.00	6.4	0.30	7.2	0.40	5.6	0.85	2.4	0.20	7.2	1.00	4.8	0.35	1.6	0.10	5.6	0.40	4.0	0.55
9	7.2	0.60	8.1	0.90	7.2	0.20	8.1	0.20	6.3	0.60	2.7	0.10	8.1	0.80	5.4	0.10	1.8	0.05	6.3	0.10	4.5	0.50
<b>Right Bank</b>	8.0	0.00	9.0	0.00	8.0	0.00	9.0	0.00	7.0	0.00	3.0	0.00	9.0	0.00	6.0	0.00	2.0	0.00	7.0	0.00	5.0	0.00
Feature Type (riffle, run, or pool)	pool		pool		pool		pool		pool		pool		pool		pool		pool		pool		pool	

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Aaron Ball      Date: 10/25/07

WBID # 1234  
 Site # 6

### **Field Data Sheets For Recreational Use Stream Surveys**

#### **Data Sheet B-Site Characterization**

Date & Time:	10/25/07	10:50	Site Location Description (e.g. road crossing):
Personnel:	Aaron Ball, Drew Dodson		CR 100
Current Weather Conditions:	clear	Facility Name:	Appleton City WWTF
Weather conditions for the past 10 days:	2.17 inches	Permit Number:	MO 0021105
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>			

#### **Site Location:**

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0421308	4211385		5.1	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0421606	4211051		5.1	

#### **Photos:**

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
24	Downstream	25	Upstream		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

#### **Uses Observed:**

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				



WBID # 1234  
Site # 6

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B- Site Characterization (Continued)**

**Surrounding Conditions:**

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input checked="" type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments: Baldwin Lakes				

**Evidence of Human Use:**

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input checked="" type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: none				

**Substrate:**

% Cobble 30	% Gravel	% Sand	% Silt	% Mud/Clay 70	% Bedrock
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**Aquatic Vegetation:**

none
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**Water Characteristics:**

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input checked="" type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 1234  
Site # 6

**Field Data Sheets for Recreational Use Stream Surveys**

**Data Sheet B - Site Characterization (continued)**

**Additional Stream Morphology:** (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

**Comments:** (Please record any additional comments here.)

none

**Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.**

Surveyor's Signature: Aaron Ball Date of Survey: 10/25/2007

Organization: SES, Inc. Position: Field Team Leader

# Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet C - Field Survey Results

Waterbody ID: <u>1234</u> Site #: <u>6</u>  Estimated Channel Incision: <u>2.0</u> (m) (height between low bank width and water)  GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) <b>01</b> UTM X: <u>0421308</u> UTM Y: <u>4211385</u> +/- <u>5.1</u> (meters) <b>11</b> UTM X: <u>0421606</u> UTM Y: <u>4211051</u> +/- <u>5.1</u> (meters)  Average Stream Width: <u>10</u> (meters)      Length of Survey Segment: <u>200</u> (meters) (To determine Length of Reach)      (20x average stream width)  Field Staff: <u>Aaron Ball, Drew Dodson</u>	<b>Dissolved Oxygen</b>  Date: <u>10/25/07</u> Time: <u>10:52</u>  Dissolved Oxygen: <u>11.1</u> (mg/L)  Dissolved Oxygen: _____ (% sat)  Specific Cond: _____ (µS/cm)  Water Temperature: <u>13.2</u> (°C)
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### Transect Cross-Section

Station	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1.0	0.55	1.0	0.35	1.3	0.50	1.4	0.90	1.8	1.00	1.7	1.00	1.8	1.00	1.7	1.00	1.7	1.00	1.2	0.80	1.2	1.00
2	2.0	0.95	2.0	0.70	2.6	0.80	2.8	1.00	3.6	1.00	3.4	1.00	3.6	1.00	3.4	1.00	3.4	1.00	2.4	1.00	2.4	1.00
3	3.0	1.00	3.0	1.00	3.9	1.00	4.2	1.00	5.4	1.00	5.1	1.00	5.4	1.00	5.1	1.00	5.1	1.00	3.6	1.00	3.6	1.00
4	4.0	1.00	4.0	1.00	5.2	1.00	5.6	1.00	7.2	1.00	6.8	1.00	7.2	1.00	6.8	1.00	6.8	1.00	4.8	1.00	4.8	1.00
5	5.0	1.00	5.0	1.00	6.5	1.00	7.0	1.00	9.0	1.00	8.5	1.00	9.0	1.00	8.5	1.00	8.5	1.00	6.0	1.00	6.0	1.00
6	6.0	1.00	6.0	1.00	7.8	1.00	8.4	1.00	10.8	1.00	10.2	1.00	10.8	1.00	10.2	1.00	10.2	1.00	7.2	1.00	7.2	1.00
7	7.0	1.00	7.0	1.00	9.1	1.00	9.8	1.00	12.6	1.00	11.9	1.00	12.6	1.00	11.9	1.00	11.9	1.00	8.4	1.00	8.4	1.00
8	8.0	1.00	8.0	0.95	10.4	0.80	11.2	1.00	14.4	1.00	13.6	1.00	14.4	1.00	13.6	1.00	13.6	1.00	9.6	1.00	9.6	1.00
9	9.0	0.70	9.0	0.60	11.7	0.75	12.6	0.85	16.2	1.00	15.3	1.00	16.2	1.00	15.3	1.00	15.3	1.00	10.8	0.85	10.8	1.00
Right Bank	10.0	0.00	10.0	0.00	13.0	0.00	14.0	0.00	18.0	0.00	17.0	0.00	18.0	0.00	17.0	0.00	17.0	0.00	12.0	0.00	12.0	0.00
Feature Type (riffle, run, or pool)	pool		pool		pool		pool		pool		pool		pool		pool		pool		pool		pool	

**Notes:** Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: Aaron Ball      Date: 11.09.07

**WBID# 1234**



**Site# 1 Photo ID# 34, Upstream**



**Site# 1 Photo ID# 35, Downstream**



**Site# 2 Photo ID# 32, Upstream**



**Site# 2 Photo ID# 33, Downstream**



**WBID# 1234**



**Site# 3 Photo ID# 30, Upstream**



**Site# 3 Photo ID# 31, Downstream**



**Site# 4 Photo ID# 28, Upstream**



**Site# 4 Photo ID# 29, Downstream**



**WBID# 1234**



**Site# 5 Photo ID# 26, Upstream**



**Site# 5 Photo ID# 27, Downstream**



**Site# 6 Photo ID# 24, Downstream**



**Site# 6 Photo ID# 25, Upstream**